

Atty. Dkt.: EZI 117

REMARKS

The Office Action of February 4, 2003 has been received and its contents carefully considered.

Claims 1-22 are pending in this application. Claims 9, 13 and 14 are canceled herein without prejudice or waiver. Claims 1-6, 8, 10-12, 15-20 and 22 are amended herein, with claims 1 and 12 remaining the independent claims.

In the Office Action, the Examiner objects to the specification as not being written in proper idiomatic English. A Substitute Specification, which corrects the specific examples of non-idiomatic English identified by the Examiner, as well as additional instances found by the applicant in reviewing the original Specification, is provided in Appendix I to this Amendment. A marked-up version of the Specification is provided in Appendix II to highlight the changes made.

The Examiner also objects that Figures 1-5 in the drawings should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. Figures 1-5 have been corrected in the manner suggested by the Examiner and appear in Appendix III.

The applicants note with appreciation the Examiner's early indication that claim 14 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Rather than amend claim 14 to include the limitations of claims 12 and 13, the applicants have instead opted to delete claims 13 and 14, and include their limitations in independent claim 12. It is respectfully submitted that the amendment of claim 12 in this manner not only places claim 12 in condition for allowance, but also makes allowable all of the remaining claims depending from claim 12, namely claims 15-22.

In the Office Action, claims 1-5, 9, 10, 12, 13, 15-19 and 21 stand rejected under 35 U.S.C. 102(b) as being anticipated by the Audit et al., U.S. Patent No. 5,370,711A. To overcome this rejection, the applicants have amended independent claim 1 to incorporate the limitations recited in dependent claim 9.

With regard to claims 9 and 10, the Examiner points to Audit (Figures 1a-1b) as disclosing the "current collectors" with "protrusions" (68) are formed with O-rings (78) which the Examiner interprets as the "pressure adjusting means" and "rubber packings" recited in the claims. The applicants respectfully disagree. The relevant text in Audit (column 13, lines 63-66) indicates only that "a seal member such as an o-ring 78 may extend around the current

AMENDMENT

09/840,034

- 7 -

Atty. Dkt.: E21 117

collectors 68 to prevent leakage electrolyte between the current collectors 68 and casing 42." There is nothing in the figures referenced by the Examiner or in the text of Audit to suggest that the o-rings could act as "a pressure adjusting means inserted between the housing and the anode and cathode terminals so as to maintain a predetermined constant pressure between the electrode body and the anode and cathode terminals," as claim 9 requires. There is no suggestion in the figures or text of Audit that the o-rings exert any force against the current collectors causing them to engage with the electrode bodies. Further, Audit fails entirely to address the possible problem of expansion of the housing due to increased temperature or internal gas generation, that has prompted the applicants to include "a pressure adjusting means" in the present intervention (see original specification and its page 11, lines 12-18).

For the foregoing reasons, it is respectfully submitted that claim 1, as amended to include the limitations of claim 9, patentably distinguishes over the Audit reference. It is further submitted that claims 2-8, 10 and 11 patently distinguish over the applied prior art for at least the reason that they depending from claim 1.

In the Office Action, claims 6-8, 11, 20 and 22 stand rejected under 35 U.S.C. 102(b) as being obvious over Audit et al. The rejection is respectfully traversed.

It is respectfully submitted that claims 6-8, 11, 20 and 22 distinguish over the applied reference for at least the reasons given above with respect to independent claims 1 and 12. In addition, it is submitted that the rejected dependent claims recite features that independently distinguish over the prior art. For example, with regard claims 6 and 20, the Examiner acknowledges that Audit does not specifically disclose metal layers on the protrusions or offset areas. Further, the Examiner acknowledges that Audit does not suggest electrode plates having a separate layer of a metal different from the substrate metal at the protrusions. However, the Examiner argues that one of ordinary skill in a art would recognize the offset regions disclosed by Audit must be electrically conductive regions in order for the battery to operate, and that therefore it would have been obvious to one ordinary skill in a art to construct the offset regions from metal, which would naturally be metal at the surface layer.

In response to the Examiner, it is noted that "[u]se of pointed ridges 70 also allows the current collectors to be pressed into contact with the winding 44 without the need for welding. Thus, manufacture of the storage devices is simplified as compared to prior art devices in which tabs were welded to the winding" (column 13, lines 30-34). Is respectfully submitted

AMENDMENT

09/840,034

- 8 -

Atty. Dkt.: E/I 117

that an object in Audit is simplicity and manufacture, and that Audit teaches that pressing the reached current collectors into contact with the electrode body provides good electrical contact without more. Clearly, there is nothing in Audit to suggest or motivate one of ordinary skill in the art to add the manufacturing step of forming an additional metal layer on the surfaces of the protrusions.

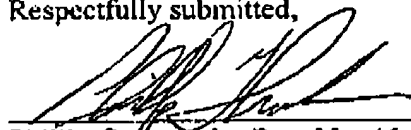
With regard to claims 11 and 22, the Examiner acknowledges that Audit does not disclosed a terminal or current collector with intersecting grooves in the bottom. The Examiner argues, however, Audit discloses that essentially any indentation pattern on the current collector may be used, and that a pattern of punched or drilled holes, as suggested in Audit, may also be considered to be a pattern with intersecting grooves.

The Examiner's argument fails to take into consideration that the object of the pattern of holes in Audit is to improve contact between the current collector and the electrode body, while the intersecting grooves in the present intervention have as their principal purpose facilitating circulation of the electrolyte within the electrode body. Claims 11 and 22 are amended herein to make this distinction clearer.

In summary, it is respectfully submitted that the application, as now amended, is in condition for allowance, and a notice to that effect is earnestly solicited.

Should the Examiner feel that a conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange such an interview.

Respectfully submitted,



Phillip G. Avruch - Reg. No. 46,076
RABIN & BERDO, P.C.
Telephone: 202-371-8976
Telefax: 202-408-0924
CUSTOMER NO. 23995

July 7, 2003

Date

PGA:tl

AMENDMENT

09/840,034

- 9 -